

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
8 July 2004 (08.07.2004)

PCT

(10) International Publication Number
WO 2004/056573 A1

(51) International Patent Classification⁷: B41J 2/14

(21) International Application Number: PCT/IT2003/000843

(22) International Filing Date: 19 December 2003 (19.12.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: TO 2002 A 001099
19 December 2002 (19.12.2002) IT

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(81) Designated States (national): AU, BR, CA, CN, HU, IL, IN, JP, KR, MX, RU, SG, TR, US, YU, ZA.

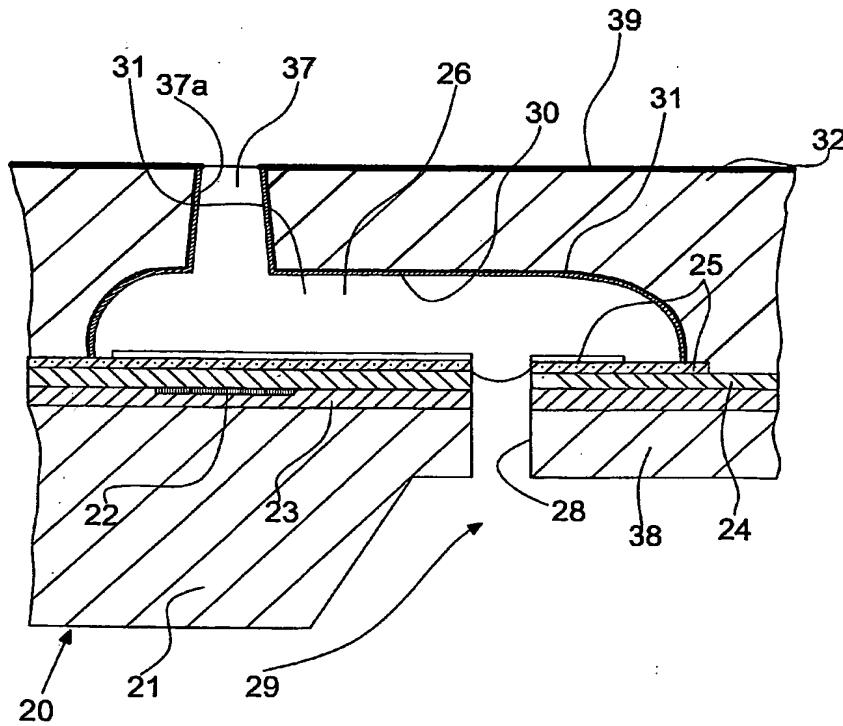
(84) Designated States (regional): European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AU, BR, CA, CN, HU, IL, IN, JP, KR, MX, RU, SG, TR, YU, ZA, European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR)
- of inventorship (Rule 4.17(iv)) for US only

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(54) Title: PROCESS FOR PROTECTIVELY COATING HYDRAULIC MICROCIRCUITS AGAINST AGGRESSIVE LIQUIDS, PARTICULARLY FOR AN INK JET PRINthead



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layer (26) through a chemical etching, in a highly acid bath; f) depositing a metallic, protective layer (39) on the outer surface (33) of the resin (32), through vacuum evaporation.

(57) Abstract: Process for protectively coating against aggressive liquids hydraulic microcircuits made in a resin (32), particularly for an ink jet printhead, consisting of: a) disposing of a silicon substrate (20) comprising a sacrificial layer (26) of copper, deposited on the substrate and defining the inner shape of the hydraulic microcircuits (35, 36, 37); b) depositing on top of the outer surface of the sacrificial layer (26), by means of an electrochemical process, at least one protective, metallic coating layer (30); c) applying on the sacrificial layer (26) a non-photosensitive epoxy or polyamide resin (32), having a predetermined thickness and suitable for completely covering the sacrificial layer (26); d) effecting a polymerization of the resin (32) to increase its mechanical resistance to mechanical and thermal stresses and performing a planarization of the outer surface (33) of the resin (32), by means of a mechanical lapping and simultaneous chemical treatment; e) removing the sacrificial